

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the depression at the center of the base plate, recited in claim 5, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, it is not understood what is meant by "in a direction vertical to said axial direction"

Claims 5-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 5 recites a depression at the center of the base plate, support for which was not found in the specification or drawings.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 7-8 are under 35 U.S.C. 102(b) as being anticipated by Shelton (4,585,207). Shelton shows a drive part 10, 19, 40, base seat 17, a valve body surrounding seals 31, 32 received in the drive part recess, which in turn holds reciprocating valve element 21. The base seat abuts the valve body so that it is held between the base seat and the drive part. The base seat is secured by studs and nuts. The studs are seen as the recited legs. Regarding claims 7-8, any fluid system having moving fluid is seen as a feeding or discharge system.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shelton. It would have been obvious to weld the nuts to the studs to prevent tampering or the nuts from backing off, or to bond the nuts with thread locking compound.

Claims 1-3 and 7-8 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Mullin (770,866) in view of Check (4,039,003). Mullin shows a drive part 2 (and inlet/outlet housing above), base seat above valve chamber 3, valve body 9 received in the drive part recess, which in turn holds reciprocating valve element 12. The base seat abuts the valve body so that it is held between the base seat and the drive part. The base seat is secured by screws. Check shows a valve with a similar base seat 68 using studs 74 and nuts to secure the seat. It would have been obvious to replace the Mullin screws with studs and nuts to aid in alignment of the base seat during assembly. The studs would then be seen as the recited legs. The directions "up" and "down" are seen as limiting only by distinction. The Mullin device could certainly be inverted and still work as well. With respect to claim 3, it would have been obvious to weld the nuts to the studs to prevent tampering or the nuts from backing off, or to bond the nuts with thread locking compound.

Claims 1-3 and 7-8 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Grove et al. ((2,727,530) in view of Check. Grove shows a drive part 10, base seat 13 below a valve chamber 3, valve body 17 received in the drive part recess, which in turn holds reciprocating valve element 12. The base seat abuts the valve body so that it is held between the base seat and the drive part. The base seat is secured by threads. Check shows a valve with a similar base seat 68 using studs 74 and nuts to secure the seat. It would have been obvious to replace the Grove threading of base seat and drive part with studs and nuts to aid in

alignment of the base seat during assembly, and do avoid distortion of o-ring 16 during assembly. The studs would then be seen as the recited legs. With respect to claim 3, it would have been obvious to weld the nuts to the studs to prevent tampering or the nuts from backing off, or to bond the nuts with thread locking compound.

Claims 4-5 as understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullin in view of Grooms (4,917,143). Grooms shows the equivalence of connecting two fluid devices together with screws (Figs 1-2) in the manner shown by Mullin, with a tongue and groove arrangement shown by applicant. It would have been obvious to replace the Mullin screws attaching the seat base with a tongue and groove arrangement because of the functional equivalence taught by Grooms.

Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hedstrom shows a coupling arrangement similar to that recited in claim 6, but inversely. Priese shows a valve actuated by fluid in both directions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Hepperle whose telephone number is 571-272-4913. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. Hepperle/
Primary Examiner, Art Unit 3753